ANNUAL REPORT

OF THE

Department of Public Works

OF THE

PROVINCE OF ALBERTA

1948-49

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

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1949

Edmonton, September 16, 1949.

To His Honour,

J. C. Bowen,
Lieutenant Governor of the Province of Alberta.

Sir,

The undersigned has the honour to submit herewith the Report of the Department of Public Works for the year ended March 31, 1949.

Respectfully submitted,

D. B. McMillan,
Minister of Public Works.

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GOVERNMENT OF THE PROVINCE OF ALBERTA

DEPARTMENT OF PUBLIC WORKS

REPORT

of the

DEPUTY MINISTER OF PUBLIC WORKS

For the Fiscal Year Ended March 31st, 1949

HON. D. B. MACMILLAN,
Minister of Public Works.

Sir:

I have the honour to submit herewith the report covering the activities of the Department of Public Works for the fiscal year ended March 31st, 1949.

HIGHWAYS, BRIDGES AND FERRIES

The mileage of main highway maintained during the year was 4,603 miles, being 167.21 miles increase over the previous year. The sum of $1,419,976.04 was expended for maintenance of Main Highways. The sum of $2,654,497.86 was expended for construction and maintenance of District Highways and Local Roads.

There were 56 Ferries operated by the Province during the season with a total expenditure on ferry operation and maintenance of $195,666.54 The increase in expenditure over the previous year was caused by high flood conditions in the spring.

An extensive programme was carried by the Main Highways Construction Branch, which included the grading of 453.08 miles of highway. 46.72 miles were re-conditioned and 1,075.77 miles were gravel surfaced A total of 220 17 miles of base course was placed during the season, together with 204.34 miles of Hot Plant Mix and 237.37 miles of Asphaltic Seal Coat. Included in the foregoing figures are 60.37 miles of grading and 122.67 miles of Gravel Surfacing on Highway No. 35, now known as the MacKenzie Highway.

The work of the Bridge Branch included erection of steel and timber bridges and culverts on Main Highways Five steel bridges and 173 timber bridges were constructed and 106 steel bridges and 609 timber bridges were repaired, making a total of 893 bridges dealt with during the year.

The total sum expended under Post War Reconstruction was $808,751.69. Of this amount, $780,304.69 was on the Grimshaw Highway, under Dominion-Provincial Agreement. The proportion of this amount paid by the Dominion Government was $35,414.32, being for period up to March 31st, 1949 The gross total expenditure made by the Provincial Government on this highway from the com-

mencement of operations on November 3rd, 1945, to March 31st, 1949, was $2,846,630.05—of which sum the Dominion repaid their share viz., $1,375,000.00.

The Expenditure on Stream Control was $11,893.32; on Aircraft, $9,553.68, and on Grant for Swimming Pool to Town of Grande Prairie, $7,000.00.

Surveys

The report of the Directors of Surveys shows an increase in the number of surveys carried forward to the ensuing year.

Town and Rural Planning Advisory Board

The Town Planning Act, R.S.A., 1942, is administered by the above Board, and the activities are covered by the report of the Director of Town Planning.

Buildings

All public buildings and institutions were repaired and maintained in order to keep them up to standard requirements.

Details of maintenance, alterations, additions and construction of buildings are contained in the report of the Superintendent of Buildings.

Mechanical Branch

The Boilers, Factories and Electrical Protection Acts, as well as operation of the Provincially owned power plants, are under the jurisdiction of the above branch and these activities are covered by the report of the Mechanical Superintendent.

Highway Traffic Board

The Public Service Vehicles Act, R.S.A., 1942, is administered by the above Board. An increase in number of licenses issued and in mileage covered by public service vehicles over the mileage of the previous fiscal year is reported.

In July, 1948, the Administration of the Provincial Gaols was transferred to the Attorney General's Department.

Respectfully submitted,

G. H. N. Monkman,
Deputy Minister.

MAIN HIGHWAYS MAINTENANCE DISTRICT HIGHWAYS AND LOCAL ROADS, FERRIES, OPERATION, MAINTENANCE AND REPLACEMENTS

(J McQueen, *Superintendent of Maintenance*)

The maintenance of Main Highways, District Highways, Local Roads and Ferries was under the supervision of ten District Engineers.

Detailed information covering expenditure for the fiscal year 1948-49 is contained in the following statement submitted with this report:

1 Statement showing expenditure on maintenance of main highways. The total mileage of this class of highway is 4,603 miles. Expenditure as shown by the statement amounted to $1,419,976.04.

2. Statement showing the distribution from both capital and income accounts of expenditure on the maintenance and construction of district highways and local roads. A total expenditure of $2,654,497.86 was made in this way.

3 Statement showing in detail the expenditure made in connection with the operation, maintenance and reconstruction of ferries from income account. There were 56 ferries operated by the Province during the season, with a total expenditure on ferry operation and maintenance of $195,666.54.

4 Snow conditions during the past winter were very severe in the southern part of the Province, necessitating snow ploughing being carried on practically all winter on main and secondary highways. The conditions in the northern part of the Province were normal.

MAIN HIGHWAYS MAINTENANCE
EXPENDITURE FOR MAINTENANCE OF MAIN HIGHWAYS
FOR YEAR ENDING MARCH 31, 1949.

Location	Miles	Amount
Walsh to Bassano	137	$ 41,277.55
Medicine Hat to Grassy Lake	49	7,463.84
Carway to Nanton	105	41,096.91
Grassy Lake to Crowsnest	152	60,629.33
Lethbridge to Coutts	63	7,045.69
Lethbridge to Waterton	71	23,378.30
Pincher to Waterton	32	19,335.56
Monarch to Carmangay	26	4,882.02
Lethbridge to Turin	37	10,922.11
Cardston to Immigrant Cap	17	4,275.93
Bassano to Banff	153	43,508.98
Nanton to 3 mi. S. of Didsbury	90	29,803.38
Okotoks to Longview	24	16,665.24
Calgary to Bowness Park	5	1,664.70
Inverlake to S.E. 16-28-21-4	57	31,881 43
S.E. 16-28-21-4 to Alsask	148	44,113.88
Drumheller to Wayne	8	3,354.72
Beiseker to 1 mi. S of Twining	25	7,339.85
Midnapore to Black Diamond	31	17,652.10
Carmangay to High River	64	16,189.89
Vulcan Corner to Cheadle	44	15,261.55
Carbon—West and South	17	2,338.13

Location	Miles	Amount
Wetaskiwin to Edmonton	36	13,253.67
Hayter to Wetaskiwin	166	63,681 28
Butze to Edmonton	171	41,365 25
Fort Sask. Bridge to Chipman Corner	38	13,380.77
Lloydminster to Edmonton	154	50,072 63
Lloydminster to Marsden Corner	45	4,574.89
Battle River to Viking	52	4,873.07
Wainwright to Vermilion	37	7,530 96
Bruderheim to Myrnam	93	4,127.32
Cooking Lake Highway to Airport	1	85.46
3 mi. S of Didsbury to Wetaskiwin	102	36,849.13
Red Deer to Windy Point	129	25,894 60
Compeer to Nevis	148	35,602 07
Nevis to Rimbey	65	27,961.71
Wetaskiwin to Norbuck	51	14,932.40
Bentley to Sylvan Lake	11	2,208.74
1 mi. S. of Twining to Nevis	62	14,362 00
Olds to Sundre	24	8,863.93
Hanna to Battle River	63	8,702.42
Penhold to Lousana	28	4,759 11
Vilna to St. Paul-Cold Lake	115	45,249 39
Lac La Biche to N.E. 24-67-18-4	27	5,104.24
Edmonton to Jasper Park Boundary	200	75,516.96
Jasper Highway to Edmonton Beach	2	112 02
Jasper Highway to Wabamun	2	132 90
Jasper Highway to Seba Beach	2	2,720.80
Jasper Highway to Peers and McLeod River	9	1,649.33
Alberta Beach Road	6	418 54
To Country Club	2	1,264.85
Leduc to Breton	49	21,397.48
Calvel Corner to Whitecourt	85	28,417 39
Bickerdike to Mt. Park	68	16,962 58
Leyland to Luscar	4	1,612.23
Coalspur to Foothills	12	5,231 09
Edmonton to Faust	214	71,209.54
Edmonton to Fort Sask. Bridge	11	12,746 68
Clyde to Barrhead Corner	31	17,166 98
Edmonton to Vilna	98	29,343.20
Namao to Gibbons	17	7,967 64
Westlock to Smith	78	11,076 01
N.E. 24-67-18-4 to Boyle	23	7,186 64
Dunvegan to Pouce Coupe	114	40,509 82
Triangle to Grande Prairie	106	34,706 21
Faust to Dunvegan	194	52,994.58
Grimshaw to North Provincial Boundary	303	33,171.45
General		62,944 99
TOTALS	4,603	$1,419,976.04

EXPENDITURE ON CONSTRUCTION AND MAINTENANCE OF DISTRICT HIGHWAYS, AND LOCAL ROADS
FOR THE YEAR ENDED MARCH 31, 1949.

I.D. or M.D.	Income	Capital	Total
General	$ 11,926.63	$ 332 57	$ 12,259 20
General—District 1	12,239 44	217 27	12,456 71
General—District 2	961 25	833 32	1,794.57
General—District 4	9,963.10	116.32	10,079 42
General—District 5		451.31	451 31
General—District 6	6,666.98	270.35	6,937.33
General—District 7	1,546.45		1,546.45
General—District 8	2,645 53	44.17	2,689 70
General—District 9	6,446.15	330 43	6,776.58
General—District 11	6,310.27		6,310.27
General—District 12	4,910.98		4,910.98
I.D. 1	1,597.37	4,200 00	5,797.37
I.D. 3	8,043.62	16,556 24	24,599.86
I.D. 10	1,047.55	4,957 44	6,004.99
I.D. 11	10,645.11	21,159 42	31,804 53
I.D. 15	13,361.64	19,853.80	33,215.44
I.D. 21	3,859.12	11,454.58	15,313.70
I.D. 22	1,568.35	2,000 00	3,568.35
I.D. 23	2,300.57	13,653 25	15,953 82
I.D. 27	848.11	2,500 00	3,348.11
I.D. 39	2,783.83	5,313.30	8,097.13
I.D. 41	10,383.04	29,169.94	39,552 98
I.D. 42	3,651.96		3,651.96
I.D. 46	5,375.67	20,950.30	26,325.97
I.D. 50	3,061 40	24,300.00	27,361 40
M.D. 55	2,232.12		2,232.12
M.D. 57	1,970.16		1,970.16
I.D. 65	23,876.00	35,150.21	59,026 21
I.D. 68	36.00		36.00
I.D. 69	276.10		276 10
I.D. 76	27,219 02	34,090.77	61,309.79
I.D. 77	9,965.29	24,064.49	34,029 78
I.D. 78	16,680.22	18,781.92	35,462.14
I.D. 79	4,032.17		4,032 17

EXPENDITURE ON CONSTRUCTION AND MAINTENANCE OF DISTRICT HIGHWAYS, AND LOCAL ROADS
FOR THE YEAR ENDED MARCH 31, 1949.

	Income	Capital	Total
I.D. 85	1,292.83	3,000.00	4,292.83
I.D. 95	9,444.84	8,003.84	17,448.68
I.D. 96	1,858.05		1,858 05
I.D. 101	12,831.48	23,838.33	36,669.81
I.D. 102	27,889.65	41,316.90	69,206.55
I.D. 107	9,671 50	799.95	10,471.45
I.D. 108	20,712 54	29,347.55	50,060.09
I.D. 109	28,519.13	11,334.35	39,853 48
I.D. 111	2,082 07	537.35	2,619.42
I.D. 122	1,349 60	2,480.25	3,829.85
I.D. 124	1,315.59		1,315.59
I D. 125	8,607 47	4,868.20	13,475.67
I.D. 126	10,603.72	6,436.53	17,040.25
I D. 128	744 92		744.92
I.D. 129	321.30	1,575.20	1,896.50
I D. 130	12,872.08	12,532 84	25,404 92
I.D. 131	1,952.62	1,824.94	3,777 56
I.D. 132	16,030 34	12,658.51	28,688 85
M D. 133	3,759.18		3,759 18
I.D. 134	14,472.33	7,920.49	22,392 82
I D. 138	4,185 63	9,493.19	13,678.82
I.D. 139	7,067 24	4,429.40	11,496.64
I D. 143	315.90		315.90
I.D. 146	3,766 00	1,500.00	5,266.00
I.D. 147	2,278 24	15,933.40	18,211.64
Special Areas:			
Special Areas Various		$ 55,000.00	$ 55,000 00
Bow West	287 17		287.17
Indian Reserves:			
District 2	1,067.72		1,067.72
District 4	3,444.22		3,444 22
District 6	1,293.70	6,754.62	8,048 32
District 7	1,714.30		1,714.30
District 9	40.30		40.30
	$430,222.86	$552,337.24	$982,560.10

EXPENDITURE ON CONSTRUCTION AND MAINTENANCE OF DISTRICT HIGHWAYS AND LOCAL ROADS
FOR THE YEAR ENDED MARCH 31, 1949.

GRANTS TO MUNICIPAL DISTRICTS

M.D.	Income	Capital	Total
2	$ 5,790.00	$ 8,000.00	$ 13,790.00
4	4,000.00	4,000.00	8,000.00
5	2,000 00	5,000.00	7,000.00
6	9,885.21	8,000.00	17,885 21
9	4,400.00	9,000.00	13,400.00
12	6,750.00	5,000.00	11,750 00
13	1,900.30	2,330 76	4,231.06
14	9,688.00	7,100.00	16,788.00
16	8,793.79	1,680 00	10,473.79
25	9,150.00	7,000.00	16,150 00
26	13,000 00	14,000.00	27,000.00
28	34,139 71	24,000.00	58,139.71
29	13,585.98	15,000.00	28,585.98
30	16,028.40	11,000 00	27,028.40
31	6,510.24	12,000.00	18,510.24
32	4,500.00	10,000 00	14,500.00
34	2,000.00	2,000.00	4,000.00
40	8,560.75	10,000 00	18,560.75
43	6,679.67	15,000.00	21,679 67
44	12,000.00	10,000 00	22,000.00
45	8,298.63	5,000.00	13,298.63
47	20,064.79	20,000.00	40,064.79
48	13,763.18	20,000.00	33,763.18
49	18,450.00	20,000.00	38,450.00
52	34,323.05	10,000 00	44,323 05
53	11,000.00	10,000.00	21,000.00
54	26,660.00	25,000.00	51,660.00
55	38,720.59	15,000.00	53,720.59
56	14,500.00	6,000.00	20,500.00
57	9,500 60	7,000.00	16,500.00
61	16,675 00	13,000.00	29,675.00
62	19,043.34	24,000.00	43,043.34
63	42,450.00	20,000.00	62,450.00
64	26,271 72	19,565.96	45,837.68
66	12,962.00	17,000.00	29,962 00
67	15,600.00	4,000.00	19,000.00
71	13,189.75	22,218.92	35,408.67
72	6,514.75	20,000.00	26,514.75

73	48,800.00	8,700 00	57,500.00
74	6,681.45	14,000.00	20,681 45
75	18,333 33	30.809.59	49,142.92
81	24,000.00	30,000.00	54,000.00
82	22,442 52	20,000 00	42,442.52
83	26,040 00	17,000 00	43,040 00
84	24,587.60	22,530 43	47,118.03
86	25,000.00	20,000.00	45,000 00
87	10,800 00	6,000 00	16,800 00
88	3,000 00	3,000.00	6,000 00
89	9,110 52	20,000 00	29,110 52
90	6,031.00	10,000 00	16,031 00
91	10,300 00	20,000 00	30,300 00
92	22,000 00	24,000.00	46,000 00
93	18,060 00	20,000 00	38,060.00
94	14,000 00	6,000 00	20,000 00
103	31,500 00	20,000 00	51,500.00
127	12,766 35	30,000.00	42,766 35
133	4,999 50	5,000 00	9,999 50
135	4,800 98	5,000.00	9,800 98
136	4,000 00	8,000 00	12,000 00
	$874,002.10	$797,935 66	$1,671,937 76

SUMMARY

Income Account:			
Appropriation 707B-1	$430,222 86		
Appropriation 707B-3 (Grants)	874,002.10		
		$1,304,224 96	
Capital Account:			
Appropriation 771B-1	$552,337.24		
Appropriation 771B-2 (Grants)	797,935.66		
		$1,350,272.90	
			$2,654,497 86

Note: Salaries are included in appropriation 724.

EXPENDITURE ON OPERATION, MAINTENANCE AND REPLACEMENTS OF FERRIES FOR YEAR ENDED MARCH 31, 1949

Location	River	Operation and Maintenance	Replacements and Installation	Total
Desjarlais	North Saskatchewan	$ 2,271 35	$ 36.52	$ 2,307.87
Holmes Crossing	Athabasca	3,310.80	119.37	3,430.17
Dorothy	Red Deer	1,349 92	27.19	1,377.11
Pakan	North Saskatchewan	3,259 79	6 33	3,266.12
Garrington	Red Deer	2,159.39		2,159.39
*North Lloydminster	North Saskatchewan	862.84	170.93	1,033.77
Athabasca	Athabasca	6,999.64	167.62	7,167.26
Tolman Crossing	Red Deer	1,527.33		1,527.33
Lett's Crossing	Pembina	2,819.28		2,819.28
Shandro	North Saskatchewan	3,481.49		3,481.49
Hopkins	North Saskatchewan	1,259.17	2.09	1,261.26
Hutton	Red Deer	1,796 30		1,796 30
Lac Ste. Anne	Narrows	1,312 67		1,312.67
Lea Park	North Saskatchewan	3,622.60	185.18	3,807.78
Eldorena	North Saskatchewan	1,811.89	3.55	1,815.44
Sangudo	Pembina	1,319.09	49.54	1,368.63
South of Holburn	North Saskatchewan	1,253.03	112.88	1,365.91
Dunvegan	Peace	5,954.56	6,486.23	12,440 79
Bow Island	South Saskatchewan	1,255.01		1,255.01
North of Myrnam	North Saskatchewan	3,236.33	158.00	3,394.33
Genesee	North Saskatchewan	3,460.55	481.52	3,942 07
Steveville	Red Deer	2,929.37		2,929.37
Goodwin Crossing	Smoky	5,503.82	885.55	6,389.37
West of Munson	Red Deer	1,531.17		1,531.17
Berrymoor	North Saskatchewan	1,863.61	51.17	1,914.78
Finnegan	Red Deer	2,137.87		2,137.87
Lindbergh	North Saskatchewan	2,458.14	252.38	2,710.52
Allendale Crossing	McLeod	2,966.65	649 80	3,616.45
Vinca Crossing	North Saskatchewan	1,561.26	9.97	1,571.23
McLeod Valley	McLeod	7,500.81		7,500.81
North of Jenner	Red Deer	1,887.01	146.14	2,033 15
Gregory Crossing	Red Deer	4,313.25	77.50	4,390.75
Elk Point	North Saskatchewan	4,759.12	50.92	4,810.04
West of Morrin	Red Deer	2,343.41		2,343.41
Woodbend	North Saskatchewan	2,735 23	6,451.52	9,186.75
South of Falher	Little Smoky	2,262.64		2,262.64
Grovedale	Wapiti	1,958.55		1,958.55
Klondyke Crossing	Athabasca	2,346 61	1,023.26	3,369 87
Flatbush	Pembina	2,116.61	311 27	2,427 88
South of Wembley	Wapiti	3,454.38	1,956.01	5,410.39
East Coulee	Red Deer	5,157.95		5,157.95
West of Fawcett	Pembina	1,808 50	287.04	2,095.54
South of Crowfoot	Bow	2,694.07	161.55	2,855.62

EXPENDITURE ON OPERATION, MAINTENANCE AND REPLACEMENTS OF FERRIES FOR YEAR ENDED MARCH 31, 1949

Location	River			
South of Fawcett	Pembina	2,240.81	302.79	2,543.60
Waskateneau	North Saskatchewan	2,492.27	2,223 06	4,715.33
North of Blue Ridge	Athabasca	6,249 57	1,142 69	7,392.26
Mahaska	McLeod	1,766.99	56 06	1,823 05
North of Atlee	Red Deer	1,424 48	87.13	1,511 61
Watino	Smoky	4,966 83	2,997 77	7,964 60
Forbesville	North Saskatchewan	1,258.57		1,258 57
South of Empress	South Saskatchewan	2,696 85		2,696.85
Roseveal	McLeod	1,500 97	51.65	1,552 62
Warspite	North Saskatchewan	1,674 99	12 76	1,687.75
Fort Vermilion	Peace	2,505.83	47 60	2,553 43
Heinsburg	North Saskatchewan	5,204 20	4,019 92	9,224.12
Rosedale	Red Deer	34 41	-	34.41
Beauvallon	North Saskatchewan	1,539.59	84	1,540.43
Bowslope	Bow	2,322 67	46 52	2,369 19
Ferries General		5,864 63		5,864 63
		$164,356.72	$ 31,309 82	$195,666 54

*This Ferry on the 4th Meridian and operated by the Province of Saskatchewan, the Province of Alberta paying 50% of the operating cost.

BRIDGE CONSTRUCTION AND MAINTENANCE

April 1st, 1948, to March 31st, 1949

(L. G. GRIMBLE, *Bridge Engineer*)

Heavy floods in the spring of 1948 over the whole Province due to late heavy snows and a quick run-off washed out and damaged a large number of bridges. This, along with a heavy Main Highway Construction Programme, taxed the bridge crews to a maximum.

New constructions include the following work:

The steel substruction was erected for the 800' long continuous steel girder bridge over the Old Man River at Lethbridge on Highway No. 3 and a concrete deck poured. This bridge was opened to traffic October 30th, 1948.

A 135' long reinforced concrete continuous slab bridge, 22'-30'-30'-30'-22' spans, was constructed over Pincher Creek near Brocket on Highway No. 3. This bridge on a new alignment replaces an old steel Pony Truss Span.

The steel was erected for a 130' long continuous I-beam bridge. 40'-50'-40' spans, over the Battle River on Highway No. 2, near Ponoka and concrete deck poured. This bridge was opened to traffic in November, 1948.

Construction of the concrete substructure for the 770' long steel bridge over the Big Smoky River on Highway No. 34 east of Grande Prairie was started in November, 1948. This will be ready for traffic in August, 1949.

The concrete substructure for the 476' long steel through truss bridge over the Bow River near Cluny was started by the Contractor, O'Sullivan Construction Co. of Lethbridge.

The concrete substructure for a steel bridge over the Red Deer River at Empress was started by O'Sullivan Construction Co. of Lethbridge. The steel from the old bridge over the Old Man River at Lethbridge was dismantled by Government crews and shipped to Empress for erection this summer.

A new 100' steel through truss bridge was erected over the Boyer River near Fort Vermilion.

A 210' long reinforced concrete arch culvert was constructed at Fulton Coulee on Highway 16.

A new laminated treated timber deck, stripdeck and asphalt surface was placed on the 915' long bridge over the South Saskatchewan River in the city of Medicine Hat.

An 80' steel span with timber approaches was erected over the Wandering River near Lac La Biche. A 140' long timber trestle was constructed over the same river.

A 266' long treated timber trestle, 7-28' and 4-20' spans, was erected over Lac la Biche River.

A 120' long timber trestle was erected over Hunter Creek on Highway No. 2 near Hythe.

A long timber trestle was constructed over Spring Coulee on Highway No. 5.

A 125' steel span was erected over the Battle River south of Bittern Lake.

New concrete foundations were constructed for the 125' steel bridge over Mill Creek west of the town of Pincher Creek.

A 100' steel span over the Blindman River was dismantled and re-erected on the new alignment of Highway No. 12.

Four steel bridges over the Rosebud Creek near Drumheller washed out by the flood were salvaged and replaced on new substructures. A new steel bridge was erected to replace a washed out timber bridge on this same Creek.

The 125' steel bridge over the Battle River near Alliance washed out by the flood was salvaged and replaced on a new substructure.

The grade level crossing of the C.P.R. main line on Highway No. 2 was eliminated by an underpass under the railway near Blackfalds.

SUMMARY OF WORK UNDERTAKEN

Steel Bridges Constructed	5
Steel Railway Underpasses Constructed	1
Reinforced Concrete Bridges Constructed	1
Reinforced Concrete Cattlepasses Constructed	3
Timber Bridges Constructed	173
Timber Cattlepasses Constructed	5
Large steel culverts replacing bridges	65
Steel Bridges Repaired or Reconstructed:	
Regular Maintenance	17
Due to Flood	19
Timber Bridges Repaired or Reconstructed:	
Regular Maintenance	405
Due to Flood	197
River Control Projects	2
Total	893

MAIN HIGHWAYS BRANCH

(A. FRAME, *Highway Commissioner*)

During the season 1948 a total of 453.08 miles of highways were graded, 46.72 miles were re-conditioned and 1,075.77 miles gravel surfaced.

In addition 220.17 miles of Stabilized Base Course were placed together with 204.34 miles of Hot Plant Mix Surface Course and 237.37 miles of Asphaltic Seal Coat.

Due to heavy spring floods general construction on highways did not get under way until the latter part of May. Excessive flood damage on some projects required a considerable amount of extra work to repair. Excessive moisture conditions also necessitated a great deal of extra work on the subgrade in connection with Asphalt Surfacing projects.

Effective July 1st truck haul rates were increased by 1 cent per cubic yard mile over the previous schedule and on September 1st hourly rate for trucks was increased by 25 cents per hour a truck.

The Construction season ended with a period of fine weather and in spite of the late start in the spring the miles of work done compared with the previous year's programme.

The above figures include 60.37 miles of grading and 122.67 miles of Gravel Surfacing on Highway 35, which was completed in October, and is now officially designated as the Mackenzie Highway.

Following is a statement of the work performed during the year ended March 31, 1949:

GRADING

MAIN HIGHWAYS

Project	Location	Miles	Type	Work Done by
1-B-2	Strathmore Corner-Gleichen	9 07	SEG	Day Labour
1-B-2	Gleichen-Bassano	18 02	SEG	Contract
2-A-2	Town of Macleod	0 30	SEG	Contract
2-B-1	Macleod-Junction No 3 West	0 85	SEG	Contract
2-H-2	Fairview-Dunvegan	3 24	SEG	Day Labour
2-J-2	Woking-Sexsmith	3 16	SEG	Contract
2-K-1	Town of Beaverlodge	1 27	SEG	Day Labour
2-K-2	Hythe-B C Boundary	15 72	SEG	Day Labour
3-A-1 & 2	Burdett-Medicine Hat	36 94	SEG	Contract
3-B-2	Macleod-Pincher	7 83	SEG	Contract
5-A-2	Card-ton-Belly River	7 00	SEG	Contract
9-B-1	Drumheller-Hanna	16 72	GR	Day Labour
11-B	Horburg-Saunders	8 11	SEG	Contract
13 B-4	Wetaskiwin-Camrose and Wetaskiwin Con	17 37	SEG	Contract
14-A	Chauvin Col.-Saskatchewan Boundary	4 50	SEG	Contract
16-A-1	Blackfoot-Lloydminster	1 09	SEG	Contract
16-B-2	Edmonton-Baker School	15 69	SEG	Contract
16-B-2	Baker School-Chipman Corner	11 97	SEG	Contract
16-C-2 & 3	Seba Corner-Styal	11 12	SEG	Contract

TOTAL 224 27

SEG., Standard Earth Grade, 177.55 miles; GR, Grade Reconditioning, 46 72 miles By Contract, 148 25 miles By Day Labour, 76.02 miles.

GRADING

SECONDARY HIGHWAYS

Project	Location	Miles	Type	Work Done by
5-A-1	Lethbridge-Magrath	7 91	SEG	Contract
5-A-1	Magrath-Cardston	13.88	SEG	Contract
7-A-	Okotoks-Black Diamond	12.80	SEG	Day Labour
12-D-1	Lacombe-Bentley	13.31	SEG	Day Labour
12-D-1	South of Rimbey	0 57	SEG	Day Labour
12-D-2	Rimbey-Bluffton	6.82	SEG	Day Labour
13-A-2	Barrhead-Corner-Fort Assiniboine	2.90	SEG	Day Labour
19-A-2	Westerose-Winfield	9 73	SEG	Day Labour
20-A-	Bentley-Sylvan Lake	10.74	SEG	Day Labour
22-A	Black Diamond-Turner Valley	1 79	SEG	Day Labour
23-A-1	Monarch-Champion	25 02	SEG	Contract
23-A-2	High River-East	3 05	SEG	Day Labour
25-A	Lethbridge-Iron Springs	12 82	SEG	Contract
28-C	Beaver Crossing-Cold Lake	7 57	SEG	Contract
35-C	North Hay River Crossing-North Prov. Bdy.	60.37	SEG	Contract
39-A-2	Breton-North	3.54	SEG	Day Labour
44-A-2	Flatbush-Smith	22.90	SEG	Day Labour
45-A 1	Andrew-Bruderheim	28.80	SEG	Contract
45-A-3	Musidora-Myrnam	15.61	SEG	Day Labour
	TOTAL	260 13		

SEG., Standard Earth Grade, 260 13 miles, By Contract, 156 37 miles, By Day Labour, 103.76 miles.

GRADING

MISCELLANEOUS

	Kasota Beach Road	3.00	SEG	Day Labour
	Flatbush Connection	2 00	SEG	Day Labour
43.28	Elkwater Lake-Wildhorse	10.40	SEG	Contract
	TOTAL	15 40		

SEG.,Standard Earth Grade, 15 40 miles; By Contract, 10.40 miles; By Day Labour, 5 00 miles.

GRADING SUMMARY

	Main Highway	Secondary Highway	Miscellaneous	Totals
Standard Earth Grade	177.55	260 13	15.40	453.08
Grade Reconditioning	46.72			46.72
TOTALS	224.27	260.13	15 40	499.80
By Contract	148.25	156.37	10.40	315.02
By Day Labour	76.02	103.76	5.00	184.78
TOTALS	224 27	260.13	15.40	499.80

GRAVELLING

FIRST COURSE GRAVEL SURFACING—MAIN HIGHWAYS

Project	Location	Miles	Work Done by
1-B-2	Strathmore Corner-Bassano	28 81	Contract
2-J-2	Woking-Sexsmith	18.21	Day Labour
2-K-2	Beaverlodge-B.C. Boundary	24 09	Day Labour
3-A-1 & 2	Burdett-Medicine Hat	36.82	Contract
5-A-2	Cardston-Leavitt	7.00	Day Labour
12-A	Veteran-Monitor	24.59	Contract
13 B-4	Wetaskiwin-Camrose & Connection	16.34	Contract
16-A-1	Blackfoot-Lloydminster	6.52	Day Labour
16-B-2	Edmonton-Chipman Corner	30.86	Contract
16-C-2	Seba Corner-Styal	2.35	Day Labour
16-C-2	Seba Corner-Styal	8.31	Contract
34-A-3	West of Smoky River	8.61	Day Labour
36-A 1	Viking-Killam	23.20	Contract
	TOTAL	235.71	

By Contract ... 168.93 miles
By Day Labour ... 66 78 miles

SECONDARY HIGHWAYS

5-A-1	Welling-Magrath	6.55	Day Labour
5-A-1	Welling-Cardston	25 54	Contract
7-A	Okotoks-Longview	12.87	Contract
12-D-1	Lacombe-Bentley	13 30	Day Labour
20-A	Bentley-Sylvan Lake	10.91	Day Labour
22-A	Midnapore-Black Diamond	1.79	Contract
23 A-1	Monarch-Champion	24.75	Contract
25-A	Lethbridge-Turin	19 42	Contract
28-C	Beaver Crossing-Cold Lake	7.50	Day Labour
35-B & C	Metis Settlement-North Alberta Boundary	122.67	Contract
39-A-1 & 2	Calmar-Breton	15.00	Contract
39-A-2	Breton-North	3 53	Day Labour
44-A-1 & 2	S. of Fawcett-N of Flatbush	21 36	Day Labour
44 A2	N. of Flatbush-Smith	32.90	Contract
45-A-1	Andrew-Bruderheim	32 66	Day Labour
45-A-3	Musidora-Mynam	14.95	Day Labour
47	Coalspur-Cadomin	21.20	Day Labour
47-B	Coalspur-Stereo	10 00	Day Labour
	TOTAL	396.90	
	By Contract	254.94 miles	
	By Day Labour	141 96 miles	

MISCELLANEOUS

Flatbush Connection	2.27	Day Labour
Fawcett Connection	1.23	Day Labour
Kasota Beach Road	3.00	Day Labour
TOTAL	6 50	

REPLACEMENT GRAVEL SURFACING– MAIN HIGHWAYS

Project	Location	Miles	Work Done by
2-F 1 & 2	North of Grosmont-Smith	21 00	Contract
2-F-1 &2 &3	Athabasca-West of Smith	37.60	Day Labour
2-F-3 & 4	Mitsue-West	14.80	Day Labour
9-B-1	Drumheller-Hanna	46.72	Contract
13-B-2 & 3	Camrose-Strome	18.70	Contract
14-A	Wainwright-Chauvin Corner	28.27	Contract
16-C-3 & D-1	Styal-Edson	58.53	Contract
	TOTAL	225 62	
	By Contract	173 22 miles	
	By Day Labour	52 40 miles	

SECONDARY HIGHWAYS

7A	Okotoks-Longview	11 08	Contract
22-A	Midnapore-Black Diamond	30.08	Contract
24-A	West Mossleigh-One Mile East	6.50	Day Labour
28-A-1, 2 & B-1	Bon Accord-Smoky Lake	59.24	Contract
28-B-1, 2 & C-1	Smoky Lake-St. Paul	58 66	Contract
32-A	Junction Highway 16-McLeod River	9.32	Contract
11-A	Vermilion-South of Battle River	31.16	Contract
45-A-1 & 2	East of Andrew-West of Andrew	5.00	Day Labour
	TOTAL	211.04	
	By Contract	199.54 miles	
	By Day Labour	11 50 miles	

GRAVELLING SUMMARY

	Main Highway	Secondary Highway	Miscellaneous	Totals
First Course Gravelling	235.71	396.90	6.50	639.11
Replacement Gravelling	225.62	211.04		436 66
TOTALS	461.33	607.94	6.50	1,075.77
By Contract	342 15	454.48		796.63
By Day Labour	119.18	153.46	6.50	279.14
TOTALS	461.33	607.94	6.50	1,075.77

STABILIZED BASE COURSE—MAIN HIGHWAYS

Project	Location	Miles	Type	Work Done by
2-A-2	Highway Through Macleod	1 27	Road Mix Stabilized	Contract
2-B-1 & 2	High River-Macleod	67 06	Road Mix Stabilized	Contract
2-D-1	Red Deer-South of Morningside	17 51	Road Mix Stabilized	Day Labour
2-D-1	South of Morningside-Ponoka	6 79	Road Mix Stabilized	Contract
2-D-2	Ponoka-Wetaskiwin	21 60	Road Mix Stabilized	Contract
2-E-1	Edmonton-Morinville	8 65	Road Mix Stabilized	Contract
2-E-1 & 2	Morinville-Clyde Corner	21 95	Road Mix Stabilized	Contract
3-B-1	Lethbridge-Macleod	29.94	Road Mix Stabilized	Contract
3-B-2	Macleod-Pincher	28 62	Road Mix Stabilized	Day Labour
16-C-1	Edmonton-Stony Plain	16 78	Road Mix Stabilized	Day Labour
	TOTAL	220 17		

By Contract ..... 157 26 miles
By Day Labour ..... 62.91 miles

ASPHALTIC SURFACING MAIN HIGHWAYS

Project	Location	Miles	Type	Work Done by
2-B-1 & 2	High River-Macleod	46 31	2" Hot Plant Mix Surface Course	Contract
2-D-1	Red Deer-S of Morningside	17 51	2" Hot Plant Mix Surface Course	Day Labour
2-D-2	Ponoka-Wetaskiwin	21 60	2" Hot Plant Mix Surface Course	Contract
2-E-1	Edmonton-Morinville	13 51	2" Hot Plant Mix Surface Course	Contract
2-E-1 & 2	Morinville-Clyde Corner	16 46	3" Hot Plant Mix Surface Course	Contract
3-B-1	Lethbridge-Macleod	29 94	2" Hot Plant Mix Surface Course	Contract
3-B-2	Macleod-Pincher	28 62	2" Hot Plant Mix Surface Course	Day Labour
4-A-1	Lethbridge-Warner	11 04	2" Hot Plant Mix Surfacing Course	Contract
5-A-1	Lethbridge-Kenyon Airport	2.57	2" Hot Plant Mix Surfacing Course	Contract
16-C-1	Edmonton-Stony Plain	16 78	2" Hot Plant Mix Surfacing Course	Day Labour
1-B-3	Calgary-Strathmore	26 77	Seal Coat	Contract
1-C-1 & 2	Calgary-West of Cochrane	27 00	Seal Coat	Contract
2-B-1 & 2	High River-Macleod	19 04	Seal Coat	Contract
2-E-1	Edmonton-Morinville	15 10	Seal Coat	Contract
2-E-1 & 2	Morinville-Clyde Corner	4 15	Seal Coat	Contract
3-A-3	Lethbridge-Taber	29 97	Seal Coat	Contract
3-B-1	Lethbridge-Macleod	2 05	Seal Coat	Contract
4-A-1 & 2	Lethbridge-Coutts	62 90	Seal Coat	Contract
5-A-1	Lethbridge-Kenyon Airport	2 57	Seal Coat	Contract
16-C-1 & 2	Edmonton-Seba Corner	47.82	Seal Coat	Day Labour
	TOTAL	441.71		

By Contract (Hot Plant Mix Surface Course)	141.43 miles
By Day Labour (Hot Plant Mix Surface Course)	62 91 miles
By Contract (Seal Coat)	189.55 miles
By Day Labour (Seal Coat)	47 82 miles
Hot Plant Mix Surface Course	204 34 miles
Seal Coat	237.37 miles

STABILIZED BASE AND ASPHALTIC SURFACING SUMMARY

Subgrade Preparation Gravel	428,933	Cubic Yards
Subgrade Preparation Clay	90,437	Cubic Yards
Stabilized Base Course Gravel	1,409,391	Tons
Plant Mix Aggregate	352,748	Tons
Shoulder Aggregate	43,449	Tons
Total Asphalt Used	6,532,376	Gallons
Seal Coat Sand	2,660	Tons
Seal Coat ½ inch Chips	30,447	Cubic Yards
Seal Coat Area	2,472,305	Square Yards

TOTAL GRAVEL QUANTITIES TAKEN OUT UNDER ALL PROJECTS

	Day Labour	By Contract	Total Cu Yds
Pit Run to Trucks	135,776	366,507	502,283
Pit Run to Stockpile	3,300	218	3,518
Crushed Gravel to Trucks	120,959	735,495	856,454
Crushed Gravel to Stockpile	83,353	455,672	539,031
Crushed Gravel From Stockpile to Trucks	442,926	378,108	821,034
TOTAL CUBIC YARDS	786,320	1,936,000	2,722,320

CENTRE LINE PAINTING

Project	Location	Miles	Work done by
1-B-3	Strathmore-Calgary	26 77	Contract
1-C-1 & 2	Calgary-W of Cochrane	26 78	Contract
2-B-3	Calgary-N of Okotoks	21 33	Contract
2-C-1	Calgary-Carstairs	35 10	Contract
2-D-2 & 3	Wetaskiwin-Edmonton	37.02	Contract
3-A-3	Lethbridge-Taber	29 62	Contract
4-A-1 & 2	Lethbridge-Coutts	62 90	Contract
5-A-1	Lethbridge-Kenyon Airport	2 57	Contract
16-C-1 & 2	Edmonton-Seba Corner	47 82	
	TOTAL	289 91	

MAIN HIGH

STATEMENT OF EXPENDITU

Project No.	Description	Total	Engineering	Grading	Culverts	Fencing
1A2	Medicine Hat to Kininvie	$ 7,489.06	$ 7,485.23	$ 3.83		
1B1	Brooks to Bassano	1,331.75	12.83	545.20	$ 190.12	
1B2	Bassano to N.E. 12-24-23-4	332,157.97	27,534.47	196,089.82	48,737.14	$ 6,613.54
1B3	N.E.12-24-23-4 to Calgary	87,805.46	1,376.06		70.01	
1C1	Calgary to Radnor	80,957.62	2,544.85	31,014.74	491.32	4.16
1C2	Radnor to Banff Park	5,021.89	83.37			594.00
2A2	Cardston to Macleod	3,627.94	18.00			
2B1	Macleod to Stavely	482,144.69	15,095.65	9,780.59	870.81	47.70
2B2	Stavely to High River	724,760.90	17,147.02	4,637.45	2,759.48	54.75
2B3	High River to Calgary	525.90	466.10	1.09		
2C1	Calgary to Carstairs	12,093.45	457.96	1.04		
2C2	Carstairs to Bowden	121,052.22	3,283.39	430.43	150.98	
2C3	Bowden to Red Deer	252.39		132.44		
2D1	Red Deer to Ponoka	659,975.71	34,128.37	133,239.99	20,051.23	2,582.38
2D2	Ponoka to Millet	424,720.61	11,156.49	1,691.37	3,793.40	
2D3	Millet to Edmonton	3,946.68	531.33	87.81		
2E1	Edmonton to Legal	996,320.93	15,390.72		1,300.54	
2E2	Legal to Rochester	243,320.13	2,768.23		344.20	
2F1	Athabasca to Lawrence Lake	19,278.55	1,244.80			
2F2	Lawrence Lake to Smith	20,195.62	1,046.02			
2F3	Smith to Slave Lake	7,208.62	608.26	1.25		
2F4	Slave Lake to Kinuso	4,732.37	380.75			
2G2	Arcadia to Triangle	36.00	36.00			
2G4	Donnelly to Peace River	5,544.39	5,509.39			
2H2	6th Meridian to Dunvegan	91,129.89	18,242.14	63,726.05	9,072.40	
2J2	Woking to Grande Prairie	54,691.32	5,257.47	16,209.28	776.19	442.54
2K1	Grande Prairie to Beaverlodge	3,092.88	112.84	1,417.84	742.33	
2K2	Beaverlodge to B.C. Boundary	156,220.76	14,518.14	81,856.72	16,154.71	277.04
3A1	Medicine Hat to Bow Island	345,615.81	13,666.27	249,482.52	16,040.15	2,373.04
3A2	Bow Island to Taber	36,613.48	2,773.43	19,364.57	6,274.15	
3A3	Taber to Lethbridge	50,793.94	417.53		854.56	
3B1	Lethbridge to Macleod	701,758.81	15,219.65	46,392.25	10,745.88	1,808.76
3B2	Macleod to Pincher	508,312.32	14,548.43	43,401.54	1,181.94	2,826.24
3B3	Pincher to Frank	13,848.66	8,893.93	1,725.74	59.86	132.50
4A1	Lethbridge to Warner	205,055.18	3,664.62	368.50		
4A2	Warner to Coutts	32,469.81	807.67	147.16	9.65	
5A1	Lethbridge to Cardston	235,479.84	21,411.13	115,372.85	12,741.47	771.79
5A2	Cardston to Waterton Park	169,590.49	13,260.83	110,965.29	25,332.71	3,868.65
6A	Pincher Creek to Waterton Park	11,412.87	11,337.62	75.25		
7A	Okotoks to Black Diamond South	160,644.03	10,075.49	111,327.96	8,836.21	300.66
9A1	Jct. No. 1 Highway to Beiseker	2,293.46	2,293.46			
9B1	Drumheller to Hanna	63,952.99	2,717.34	10,278.82		
9C1	Youngstown to Excel	41.55	41.55			
10A	Drumheller to Wayne	49.05			49.05	
11A	Jct. No. 2 to Rocky Mountain House	1,175.61		51.00		29.93
11B	Rocky Mountain House to Brazeau	136,221.62	15,793.87	109,709.40	10,633.03	
12A	Compeer to Veteran	31,880.29	3,370.18	161.84	207.25	
12C1	Stettler to Lacombe	15,168.75	10,386.50	4,022.59	469.98	
12D1	Lacombe to Rimbey	146,912.34	7,252.83	103,676.13	8,973.54	4,373.96
12D2	Rimbey to Bluffton	74,664.41	6,345.71	51,263.43	11,275.23	810.04
13A	Hayter to Hughenden	3,756.89				
13B2	Sedgewick to Daysland	2,059.90			52.92	
13B3	Daysland to Camrose	16,817.31	3,187.92			
13B4	Camrose to Junction No. 2	220,215.95	12,106.14	155,442.43	11,735.97	141.64
14A	Saskatchewan Boundary to Wainwright	96,466.20	10,088.26	43,664.47	4,649.86	
14C3	Cooking Lake to Edmonton	2,565.34		183.41	2,381.93	
15A1	Edmonton to Fort Saskatchewan	2,244.08	30.50			294.58
15A2	Ft. Saskatchewan to Chipman Corner	1,775.01	1,509.25		156.16	
16A1	Lloydminster to Vermilion	49,607.40	5,910.69	33,944.70	5,058.59	405.54
16B1	Vegreville to Chipman Corner	186.13	93.65		92.48	
16B2	Chipman Corner to Edmonton	526,783.73	30,321.84	254,500.16	35,345.59	3,663.51
16C1	Edmonton to Carvel Corner	332,883.99	7,534.02	51.03		
16C2	Carvel Corner to Entwistle	321,329.22	14,289.23	216,516.69	22,971.08	196.05
16C3	Entwistle to Carrot Creek	64,225.05	4,132.23	5,276.06		
16D1	Carrot Creek to Edson	35,835.34	2,420.69			
17A	Lloydminster to Marsden Corner	24.65	20.05			
19B	Lloydminster—North	1,880.68				
18A	Clyde Corner to Barrhead Corner	4.06		4.06		
18A2	Barrhead Corner to Fort Assiniboine	53,865.44	7,653.47	43,838.09	1,506.38	
19A1	Wetaskiwin to Westerose	3,286.69	3,286.69			
19A2	Westerose to Norbuck	55,386.08	2,640.79	43,589.85	8,302.34	
20A	Bentley to Sylvan Lake	66,934.14	1,763.03	47,859.89	2,818.27	133.25
21A1	Beiseker to Trochu	3,223.35	3,223.35			
22A	Midnapore to Black Diamond	44,769.40	3,112.78	15,349.47	1,340.33	144.75
23A1	Monarch to Champion	208,251.95	16,980.70	130,285.55	16,153.36	401.76
23A2	Champion to High River	23,817.03	13,397.91	4,930.53	4,074.59	
24A	Vulcan Corner to Junction No. 1	7,651.30				
25A	Lethbridge to Turin	223,342.89	19,923.26	102,783.76	32,616.61	1,675.52
27A	Olds to Sundre	3.75		3.75		
28A1	Edmonton to Opal	20,446.33	405.33		104.04	
28A2	Opal to Waskateneau	25,231.32	1,611.50			
28B1	Waskateneau to Vilna	42,512.99	2,360.40			
28B2	Vilna to St. Paul	44,211.04	1,575.29			
28C	St. Paul to Cold Lake	105,873.34	12,044.41	77,558.12	8,895.47	314.96
32A	Fulston Siding to McLeod River	3,861.20	106.50			
34A2	Valleyview to 6th Meridian	656.85				
34A3	6th Meridian to Junction No. 2	7,108.54	169.33	289.06		
36A1	Viking to Killam	14,306.62	912.29	31.05		
36A2	Killam to Castor	1,458.43	221.09	1,172.84		13.50
36A3	Castor to Hanna	21.72		20.00		
37A	Namao to Gibbons	731.64	731.64			
39A1	Leduc to 5th Meridian	764.49	32.70	174.94		
39A2	5th Meridian to Breton	33,405.25	4,078.31	11,534.00	1,990.13	
41A	Vermilion to Wainwright	43,435.35	434.71			
42A	Penhold to Lousana	217.25				
43A2	Sangudo to Whitecourt	2,636.13	1,264.04			
44A1	Westlock to Flatbush	28,984.36	2,121.22	876.68		
44A2	Flatbush to Smith	347,952.98	17,392.49	220,802.16	21,050.83	4.79
45A1	Jct. Highway No. 15 to Andrew	193,961.72	14,237.02	122,495.88	28,677.83	
45A2	Andrew to Two Hills	103.75		103.75		
45A3	Two Hills to Myrnam	161,413.34	8,328.17	119,410.35	14,731.81	136.75
46A	Lac La Biche to Boyle	1,627.04	1,142.71		34.50	
47	Bickerdike to Mountain Park	9,035.85				
47B	Coalspur to Foothills	6,655.21				
43.28	Elkwater to Wildhorse	70,318.02	14,757.43	42,564.15	8,942.86	3,703.58
40.00E8	Town of Claresholm	32,369.28	429.80			
40.00E9	Village of Coaldale	594.66				
40.00E20	Town of Lacombe	24,749.43		2,548.80	1,948.12	
40.00E22	Town of Macleod	8,535.33	5.00	750.60		
40.00E23	City of Medicine Hat and Town of Redcliff	1,282.50				
40.00E24	Village of Millet	777.92	48.85	60.65		
40.00E25	Town of Morinville	22,832.99		4,746.06	1,563.62	
40.00E26	Town of Nanton	11,243.42	56.75		191.54	
40.00E27	Town of Ponoka	5,036.58				
40.00E28	City of Red Deer	253.50				
40.00E29	Village of North Red Deer	491.60				
40.00E30	Town of Stavely	2,959.88	83.50			
40.00E42	City of Drumheller	136.50				
40.00E43	City of Wetaskiwin	2,331.81	257.19	1,565.12		
40.00E44	Town of High River	9,563.14	60.75	102.46		
40.00E47	City of Lethbridge	1,151.00				
40.00E49	Town of St. Albert	3.43				
40.00E59	Village of Bentley	219.56	58.50			
40.00E71	City of Edmonton	4,638.08				
40.00E72	City of Calgary	3,444.68		822.68		
40.00E114	Village of Beaverlodge	2,889.53		1,339.08	1,550.45	
40.00E144	Village of Hythe	3,487.38		1,426.79	2,024.64	
40.00E145	Village of Black Diamond	512.20				
40.00E146	Village of Turner Valley	317.26				
40.00E147	Town of Bow Island	718.80				
3077	Pit Sidings and Gravel Pits	19,474.77	9,884.82	273.00		
3083	General and Administration	138,441.73		7,317.91		856.88
		$11,328,171.68	$609,152.11	$3,234,863.81	$460,151.82	$39,998.74

SUMMARY

Appropriation 754-A	$ 164,402.68
Appropriation 754-B	11,163,769.00
	$11,328,171.68

HWAYS CONSTRUCTION

URE APRIL 1, 1948 TO MARCH 31, 1949

Compensation	Moving Poles	Gravel Surfacing	Stabilized Base Course	Subgrade Stabilizing	Seal Coat	Prime or Tack Coat	Asphaltic Surfacing	Clay Surfacing	Miscellaneous	Grants to Incorporated Areas
$ 570.00		$ 13.60								
8,148.46		45,034.54								
413.45			$ 14,506.49		$ 31,581.10		$ 39,397.85	$ 460.50		
668.08			678.92	$ 501.20	30,410.05		13,780.86	863.44		
					3,612.04		732.48			
376.80			3,228.53				4.61			
			269,182.48	85,029.69	2,379.29	$26,031.36	73,727.12			
143.60		25.60	291,433.81	150,403.73	38,368.02	932.54	218,854.90			
26.44							32.27			
70.00			2,297.27	611.85			8,655.33			
78.33		33.82	88,146.82	1,395.58			27,532.87			
			64.65				55.30			
14,141.37	22.32	40,231.75	257,624.32	29,382.36	6,627.59		120,880.03	1,064.00		
390.00		1,109.97	196,596.80	36,054.99	12,290.17		161,637.42			
75.00			10.80		2,812.49		429.25			
66.65		1,202.40	148,992.00	332,508.36	17,935.31		384,528.18	94,396.77		
5,309.94		143.23	97,469.55	6,948.91	23.34		130,312.73			
		18,033.75								
		19,149.60								
		6,599.11								
		4,351.62								
35.00										
78.00		11.30								
	164.00	31,841.84								
		819.87								
509.30		42,904.85								
953.00		63,100.08					.75			
600.00		7,601.33								
50.00		17.55	90.86		48,393.37		970.07			
825.55			263,172.92	67,741.04	8,382.54		287,470.22			
5,344.71		4,010.04	208,934.30	29,284.39	12,924.00	150.00	183,654.13	2,052.60		
		62.00	577.83				2,396.80			
1,592.13			53,088.92	1,101.98	38,666.49		106,572.54			
422.23				4,174.18	26,867.81		41.11			
17,926.46	1,648.35	49,290.73	1,775.77		1,562.04		12,979.25			
946.08		15,216.93								
3,376.00		26,727.71								
		50,956.83								
369.00		725.68								
		85.32								
2,910.54		25,230.48								
5.00		284.68								
2,886.00	554.77	19,195.11								
410.00	60.00	4,500.00								
3,756.89										
140.00		1,866.09	.89							
		13,629.39								
8,308.29	1,089.47	31,392.01								
		38,063.61								
1,919.00										
		109.60								
919.00		3,368.88								
31,240.89	1,339.12	31,801.28	69,432.78				69,138.56			
443.00		22.55	98,461.01	20,462.67	33,949.11		171,960.60			
5,040.63		35,515.23	4.94		22,761.54		4,033.83			
		54,816.76								
		33,414.65								
4.60										
1,880.68										
867.50										
853.10										
		14,359.70								
85.00		24,737.07								
4,885.31	1,334.03	38,205.49	5.75							
1,414.00										
		7,651.30								
29,904.10	1,683.00	34,756.64								
157.67		19,779.29								
		23,619.82								
		40,134.04	18.55							
		42,635.75								
1,084.98		5,975.40								
31.25		3,723.45								
656.85										
2,940.93	66.95	3,642.27								
85.00		13,278.28								
51.00										
		1.72								
		556.85								
30.60		15,772.21								
		43,000.64								
217.25										
1,372.09										
		25,778.96						207.50		
196.00		64,063.11						24,443.60		
11,197.83	600.00	16,753.16								
3,756.90		15,049.36								
320.00		129.83								
		9,035.85								
		6,655.21								
350.00										
			24,320.41		217.23		7,401.84			
							594.66			
			18,168.67				2,083.84			
			7,387.80				391.93			
										$ 1,282.50
			668.42							
			10,727.26		468.76		5,327.29			
			4,749.65		925.95		5,319.53			
			5,036.58							
										253.50
			491.60							
			2,442.73		159.99		273.66			
										136.50
		227.50	67.50							214.50
			3,668.74		889.21		4,841.98			
					275.75					875.25
					3.43					
		161.06								
							478.58			4,159.50
										2,622.00
		35.95								
		512.20								
		317.26								
		718.80								
50.00		8,501.90							765.05	
		218.00							130,048.94	
$183,877.46	$8,562.01	$1,202,499.44	$2,143,526.32	$765,600.93	$342,486.62	$27,113.90	$2,046,492.37	$123,488.41	$130,813.99	$9,543.75

The above figures include Special Appropriations 754-BS, but do not include Post War Reconstruction O/C 784-1945/46.

SURVEYS BRANCH

Report for the Fiscal Year ended March 31, 1949.

(J. H. HOLLOWAY, *Director of Surveys*)

During the year three field parties were employed from the first week in May until the first of November on surveys of main highways, new roads, road diversions and miscellaneous surveys. The volume of work arising from the greatly increased highway construction programme made it necessary for Departmental surveyors to devote most of their time to main highway right-of-way surveys. In order to complete other surveys which were urgently required, it was necessary during the season to engage from time to time surveyors in private practice. Some of the latter surveys were required by the Department of Public Works, and others by the Departments of Lands and Mines and Municipal Affairs.

During the year arrangements were made with the Department of Lands and Mines whereby that Department would take over the issuance of leases of road allowances in the southern part of the Province. The transfer of this Department's records and leases currently in effect was made to the Department of Lands and Mines at the end of the fiscal year.

During the year the issuance of leases of lots in Provincial Parks was taken over by this Branch, and 75 of these leases were issued or renewed.

The following is a summary of the work of this Branch:

Surveys required and brought forward from 1947 (after revising schedule)	333
Surveys asked for during 1948	147
Surveys made during 1948	47
Surveys carried over to 1949	433
Plans submitted and examined on behalf of Municipal Districts	85
Titles issued to roadways surveyed by Municipal Districts	68
Plans prepared and filed in Land Titles Office	52
Certificates of Title received for roadways	89
Certificates of Title received for lands given for public purposes under Departmental regulations as to subdivisions	10
Certificates of Title to Public buildings	14
Transfers issued covering lands no longer required	264
Number of plans of subdivisions approved	282
Plans submitted by Department of Water Resources	22
Plans of Power and Transmission Lines approved	162
Vouchers issued for compensation	931
Leases of road allowances in force	575
New leases of road allowances issued	55
Leases of Public Works Reserves issued	41
Leases of lots in Provincial Parks	75

Location of highways, roads road diversions, telephone right-of-way, and miscellaneous areas surveyed:

MAIN HIGHWAYS

	Twp.	Rge	Mer.
Veteran East Highway	35	5 and 6	4
Pigeon Lake Highway	46 and 47	1, 2, 3 and 4	5
Seba Highway	53	5 and 6	5
Wetaskiwin-Camrose Highway	46 and 47	21, 22, 23 and 24	4
Lethbridge-Cardston Highway	3, 4 and 5	22, 23, 24 and 25	4
Macleod-Pincher Highway	6, 7, 8 and 9	26, 27, 28, 29, 30	4
Beaverlodge-B.C. Boundary Highway	72, 73, 74, 75	10, 11, 12 and 13	6
Sexsmith-Woking Highway	74, 75 and 76	5 and 6	6
Dunvegan-Peace River Highway	80 and 81	3 and 4	6

ROAD SURVEYS

I.D.'s and M.D.'s	Section	Twp.	Rge.	Mer.
I.D. 15	8, 9 and 10	9	22	4
I.D. 15	1	9	22	4
M.D. 16	S.E. ¼ 1	10	24	4
M.D. 64	21 and 28	39	27	4
M D. 74	Pigeon Lake I.R	46	28	4
I D 95	N.E. ¼ 22	53	17	5
I D 78	S. ½ 17	54	11	5
M.D. 132	21, 22, 27 and 34	77	24	5
I.D 131	10	81	20	5
I.D. 130	1, 6 and 35	78 and 79	20 and 21	5
M D 135	31 and 36	83	22 and 23	5
M D. 135	15	84	22	5
I.D 138	2 and 3	84	23	5

MISCELLANEOUS

I.D 's and M D 's	Section	Twp.	Rge.	Mer.	
I D. 15	2	9	22	4	Retaining wall
M.D. 9	12	7	29	4	Gravel Pit
M.D. 9	29	5	1	5	Beauvais Lake Subdivision
M.D 74	14	46	24	4	Implement shed site
I D 78	16	54	14	5	Nuisance Grounds
I D 132	24	77	24	5	Subdivision
M D 127	20	71	6	6	Ditch
M D 135	32	83	21	5	Davis Park
M D. 135	32	83	21	5	Relocating block corners

THE TOWN AND RURAL PLANNING ADVISORY BOARD

For the Year ended March 31st, 1949

During the past fiscal year, administration of The Town Planning Act and Regulations has been continued by the provincial Town Planning Branch pursuant to the principles previously established by the Town and Rural Planning Advisory Board. As no general problems arose to demand the Board's consideration, the Board held no formal meetings during the year, but a number of questions with regard to particular cases were dealt with by consultation between the Director of Town Planning and the chairman and other members of the Board.

The continuation of building activity and the rapid growth of many townsites in the province has resulted in further increase in the volume of work done by the Town Planning Branch. A record number of 282 plans of subdivision were examined and approved during the year, as compared with 243 plans in 1947-48, while other phases of the work of the Branch have shown a similar increase.

Increasing interest in town planning matters on the part of local authorities has also been evident to such an extent that today, instead of having to devote considerable time to the stimulation of local interest in the planning of development, as was necessary a few years ago, the staff of the branch now finds it difficult to handle all the requests received from urban and rural authorities for advice and assistance with respect to planning problems. The necessity of looking ahead and endeavoring to guide development along economical and orderly lines is realized today almost everywhere, so much so that in Alberta the percentage of municipalities which have adopted planning measures is now higher than in any other Canadian province.

One of the most significant steps taken in that respect during the past year has been the establishment of the Calgary and District Regional Planning Commission. This body, consisting of representatives appointed to it by the City of Calgary, the Villages of Bowness and Forest Lawn, the Municipal Districts of Conrich and Springbank and Improvement District No. 46, is concerned with all those phases of physical development within a wide area surrounding the city in which any two or more of the represented municipalities may have a common interest. So far, its attention has necessarily been restricted to organizational matters and to the numerous localized problems which arise so frequently under current conditions of rapid development, but it is anticipated that it may soon be possible for this Commission to deal with some of the broader aspects of planning which may well be studied by a body such as this with resultant profit and advantage to the municipalities concerned.

Local interest in planning measures has also extended further into the rural parts of the province. Following the precedent set by the Municipal District of Ponoka in 1947, the rural municipalities of Leduc, Strathcona and Pembina have enacted comprehensive zoning and building bylaws during the past year and the Municipal District of Stony Plain has taken initial steps in the same direction. On each case, considerable time was spent by the staff members of the Town Planning Branch in assisting these local authorities with the necessary preliminary surveys, the preparation of maps and the drafting of the bylaws.

New zoning bylaws were also passed during the year by the Village of Forest Lawn, the Town of Leduc and the City of Red Deer, the two latter being complete revisions of earlier bylaws. The following number of amendments of existing bylaws were also passed: City of Calgary, 14; City of Edmonton, 7; City of Lethbridge, 1; M.D. of Sprinkbank, 1, Town of Edson, 1; Town of Sylvan Lake, 1. Progress in the preparation of new bylaws was also made by the City of Medicine Hat, the Towns of St. Albert, Beverly and Innisfail and the Village of Rimbey.

One of the most interesting projects with which the Branch has been concerned is the development of the new townsite of Devon in the Leduc oil field. Having assisted in the initial planning of this townsite in 1947-48, the Branch from time to time was called upon for further advice and assistance during the subsequent building of the town. Development has proceeded rapidly with only minor departures from the original plan and by the end of the fiscal year, some 120 dwellings, as well as several commercial and public buildings, had been completed, all utilities (including water, sewer electric power, gas and telephone lines) had been installed, and much street construction work had been done.

During the year, 26 transfers of land were dealt with under the provisions of Section 35 of the Act; approval was granted in 23 cases and refused in 3 cases. Eighteen applications for approval of proposed tourist camp sites were dealt with and a number of applications for approval of new gas station locations were considered and disposed of by joint consultation with the Main Highways Branch.

BUILDINGS BRANCH

Report for the Fiscal Year ended March 31st, 1949

(A. ARNOLD, *Superintendent of Buildings*)

The general repair and maintenance of all public buildings and institutions has been carried on by the Branch as in previous years, to keep up the standard. Several buildings were erected by contract under the supervision of our inspectors and directed from this office.

Following is a list of the projects:

Bonnyville:

Provincial Building was completed to accommodate Treasury Branch. Liquor Store and Agricultural Offices.

Brooks:

At the Demonstration Farm levelling and draining of grounds was carried out, also construction of hot beds and tobacco hop drier.

Calgary:

The Drill Hall at Institute of Technology was converted to Aeronautics Laboratory.

Four Huts were purchased and renovated for educational purposes at the Institute of Technology.

Construction proceeded on the Maids' Dormitory at the Central Alberta Sanatorium.

Construction was commenced on Recreation Hall. Chapel and Laboratory.

Elevator was installed in Provincial Building.

Extension was made to Red Cross Blood Bank.

Garage and Storage House was completed at Fish Rearing Ponds.

At the Storage and Repair Shop, Manchester, water and sewer line was installed. Considerable alterations to Blacksmith Shop and the new Storage and Repair Shop was completed.

Camrose:

Provincial Auxiliary Home (Rosehaven):

Roof on main building was rebuilt.

The Root House was completed.

Canmore:

Residence for Ranger was completed.

Cardston:

Provincial Building was completed.

Claresholm:

Provincial Auxiliary Mental Hospital:

A new sewage system was installed.

Cold Lake:

A building was purchased for use as fishery storage warehouse.

Devon:

Two residences were purchased for Oil Conservation Board.

A Storage, Office and Garage Building were constructed.

Edmonton:

The Louis Cafe building, now known as Provincial Building No. 2, was purchased to accommodate the Department of Industries and Labor.

Construction was commenced on Aberhart Memorial Tuberculosis Sanatorium.

Alterations were carried out in the Public Works Building to accommodate the Alberta Liquor Control Board Beer Warehouse.

Storage and Repair Shop—A hangar was moved from Bowden and erected and alterations commenced for exterior to existing shop.

The Heating Plant was completely renovated.

A Quonset Hut was purchased and erected for additional storage space.

A new Paint Shop and Storage Building was erected at rear of Terrace Building.

Extensive alterations were carried out in Alberta Jasper Building.

Old Victoria Armouries Building, now known as Health Guidance and Surveys Building was purchased to accommodate various branches of the Department of Public Health, and alterations were commenced.

Entrance:

A Ranger Station and Foreman's residence was constructed.

Fairview:

Land was purchased for erection of an Agricultural School.

Fort Saskatchewan:

Provincial Jail:

Extensive alterations to men's kitchen were completed.

Construction on new Laundry Building was commenced.

Grande Prairie:

Quonset Hut was purchased and erected for use of Highway Maintenance Branch.

Lacombe:

Construction was commenced on new Provincial Building.

Lac La Biche:

A double garage was built at Radio Station.

A bunkhouse was constructed.

Lethbridge:

Provincial Jail:

A 12-stall addition to cow barn was built.

Medicine Hat:

Buildings were purchased from the airport for Storage buildings at Highways Maintenance Shop.

Mundare:

Property was purchased for Liquor Vendor Store.

Olds:

Construction of Provincial Building was commenced.

Agricultural School - Mechanics Building was completed, and a central heating system was installed and extending of lines from same to all buildings was commenced.

Water and sewer line was connected to Town of Olds.

Boys' residence was stuccoed.

The fume exhaust and blower system was installed in the Blacksmith Shop.

Oliver:

Provincial Mental Institute:

The steamline was extended to Farm.

New house was built for septic tank operator.

Female Dormitory No. 7 was completed.

A new Carpenter Shop was constructed.

Construction was commenced on a T.B. Hospital.

At the Nurseries a packing shed, workshop and double garage was constructed.

Ponoka:

Provincial Mental Hospital:

Air conditioning system was completed.

Laundry Building was completed.

Construction was commenced on Occupational Therapy Building.

Two Staff dwellings were completed.

Farm Dormitory was completed.

New Ice House was built.

Additions were made to Hen Houses and Brooder Houses.

Addition was made to Kitchen and Refrigeration at Farm.

Property was purchased for Provincial Building.

Raymond:

Provincial Auxiliary Mental Hospital:

Two-car heated garage was constructed.

An "H" Hut was purchased from Demolition and alterations were commenced on same for a Dormitory.

Red Deer:

Construction of new Recreation Building was commenced at Provincial Training School.

Alterations were commenced on main building.

The two new dormitories were completed.

Construction was commenced on a new dormitory.

Ryley:

Building was purchased for a Treasury Branch.

Vegreville:

Alterations were made to Provincial Building to accommodate Treasury Branch, Liquor Store and District Agriculturist.

Vermilion:

The construction of various buildings and other work was carried on at the School of Agriculture.

Water and sewer line was installed to buildings and connected with the town's system.

Roads were gravelled.

A foundation and floor for 2-stall garage was constructed.

Three staff residences were stuccoed.

Repair Shop and Machine Shed was constructed.

Root Cellar was extended.

A staff residence was moved and placed on new foundation.

A Provincial Building was purchased and remodelled to accommodate Treasury Branch, Liquor Store and Judicial Offices.

Whitecourt:

A Workshop and Storage building was erected for Department of Lands and Mines, Forestry Branch.

Wainwright:

Building was purchased for Treasury Branch.

BUILDINGS AND MAINTENANCE BRANCH—EXPENDITURE FOR 1948-49

CAPITAL EXPENDITURE

756	Furniture and Equipment(Legislative and Departmental Building and Public Institutions	$ 389.418.75
759	Sites and Construction	3,417,237.12
S.W. 17	Grant of University of Alberta for Renovating Building at Institute of Technology and Art, Calgary	25,901 05
		$3,832,556.92

INCOME EXPENDITURE

708	Administration	$ 47,268.83
709	Legislative and Departmental Buildings	984,313.17
710	Public Institutions	189,266.36
713	Government House	553.50
		$1,221,401.86

MECHANICAL BRANCH

Report for the Fiscal Year ended March 31, 1949.

(VERNON PEARSON, *Superintendent*)

This report deals with the activities of the following subdivisions of the Mechanical Branch for 1948-49.

1. The maintenance and operation of power plants and utility services of the eight largest institutions.
2. The administration of The Steam Boilers Act.
3. The administration of The Factories Act.
4. The administration of The Welding Act.
5. The administration of The Electrical Protection Act.

Power Plants and Institution Maintenance

The situation with regard to the supply of material required for the proper maintenance of the Power Plants and the various utility services at the Institutions is still not satisfactory. This is particularly true with regard to the supply of repair parts for electrical equipment pipe and plumbing goods. The situation with regard to skilled labour is improving.

Examination of the Power Plant statistics will show that there was an increase in the services supplied to the Institutions with a considerable increase in cost. There appears to be no let-up in this trend.

The most significant change in the Power Plant statistics is the decrease in the consumption of coal and the very large increase in the consumption of natural gas. One 200 h.p. Boiler in the Parliament Building's Plant was converted from coal to gas burning and two 225 h.p. Boilers were similarly converted at the Ponoka Mental Hospital.

At the Provincial Training School, Red Deer, a gas line was laid by the Gas Company to serve the Institution and the Power Plant. One Boiler has been temporarily converted to gas and it is expected that the new Power Plant will use gas entirely for fuel.

A used 600 kilowatt Steam Engine Generator set was purchased in the U.S. for installation at the Oliver Mental Hospital and is now in the process of being installed. It was necessary to make an addition to the Power House Building to accommodate this unit.

A new 80 kilowatt Steam Engine Generating set was put into operation at the Fort Saskatchewan Gaol.

A 100 kilowatt Steam Engine Generating set was removed from the Oliver Mental Hospital Power Plant and sent to the Central Alberta Sanatorium, where it is now in the process of being erected.

A new 6" water line was laid from the City of Lethbridge to the Lethbridge Gaol with connections to the Dominion Experimental Farm. This water line was a joint undertaking by the Dominion and Provincial Governments. The Province supplied the pipe and the Dominion Government paid all ditching and installation expenses.

PROVINCIAL GOVERNMENT POWER PLANT STATISTICS

For Year ended March 31, 1949.

(Vernon Pearson, Mechanical Superintendent)

No	NAME	FUEL			WATER	ELECTRICITY		MECHANICAL REFRIGERATION	
		Coal (Tons)	Gas (Cubic feet)	Pumped from local Sources (Imperial Gallons)	Purchased	Generated	Purchased	Tons	Expenditure for Maintenance and Operation
1	Parliament Buildings and Administration Edmonton	3,304	24,569,000		10,472,740	1,031,840	642,560		$ 43,015.15
2	Institute of Technology, Calgary	170	25,021,000		7,935,328	174,600	63,000		17,888.71
3.	Ponoka Mental Hospital	9,224	83,528,000	61,751,000		1,619,600		5,475	130,055.92
4	Fort Saskatchewan Gaol	3,764		13,130,000		338,270			35,037.48
5	Lethbridge Gaol	3,145		12,145,800	8,284,880	114,875			26,948.84
6	Oliver Mental Institute	10,846			48,887,000	1,319,200			106,091.14
7	Central Alberta Sanatorium, Calgary		57,309,000	17,154,700		416,320		1,200	39,331.55
8	Provincial Training School, Red Deer	2,184	9,225,000		11,646,438	80,465	57,480		31,783.56
	TOTALS	32,637	199,652,000	104,181,500	87,226,386	5,095,170	763,040	6,675	$430,152 35

Total Coal used	32,637 Tons
Total Gas used	199,652,000 Cubic Feet
Total Water used	191,407,886 Imperial Gallons
Total Electricity used	5,858,210 Kilowatt Hours
Total Refrigation	6,675 Tons

THE BOILERS ACT

There were no fatalities or serious accidents caused by the failure of any pressure vessel.

Captain Arthur Simmons of the Calgary Fire Department suffered fatal injuries in a fall while fighting a fire at the Union Packing Company's plant at Calgary. The fire followed the rupture of a cross-over pipe on one of the ammonia compressors. It is assumed that escaping ammonia gas and liquid, mixing with the air in the compressor room, formed a flammable mixture which was ignited by a spark at the switchboard when the operator pressed the stop button.

Engineer John Meckelberg, Temperature Reader George Morasch and Livestock Scaler Les Malin suffered burns when the explosion occurred.

John Nesbitt Kelly, Separator Man for the Home Oil Company, Turner Valley, died from a heart attack, brought on by hurrying through deep snow following the closing of a well head valve. The rupture of a safety disc on a gas and oil separator necessitated the closing of the valve at the well to stop the flow of gas and oil.

John Charles Griffiths received first degree burns on his back, the backs of both arms and both legs at the Husky Oil and Refining Limited Power Plant, Lloydminster, when boiling water overflowed from the top manhole of Number One Boiler while he was opening the blow down valve.

James Isaac and Hugh Hill were severely burned at the Excelsior Refinery, Lloydminster, when a flash fire destroyed the Refinery Treater House. They were investigating a hissing sound, caused by a leaking gasket on the hot oil pump, when an explosion occurred.

Engineer James Murray suffered shock when an explosion occurred while lighting the gas burners under Boiler (A) 23233 at the Royal Alexandra Hospital, Edmonton. Extensive damage was done to the casing, setting and supporting columns of the boiler. The lower drums were pushed outward and they had to be restored to their original position before the tubes were re-expanded.

Three fingers on Engineer John Mackin's right hand were severely mangled at the Broder Canning Company's Plant, Lethbridge, when his glove was caught by the crosshead of a large circulating pump while he was wiping oil from the piston rod.

Thomas Barton and Kenneth James suffered burns on the face and chest at the Alberta Co-operative, Edmonton, when an explosion occurred while Barton was endeavouring to light the gas burners under Heating Boiler (A) 6769. In addition, Barton, who was in the direct path of the blast, suffered injuries to his head and shoulders when he was thrown against the boiler room wall. The setting was extensively damaged by the explosion. It was necessary to straighten the supporting columns and to rebuild the entire setting.

Earl Fawcett, United Grain Growers Elevator Agent at Blackie was seriously injured when his clothes were caught by a revolving shaft under the elevator floor.

The boiler room at Dr. Ballard's Animal Food Plant, East Calgary, was completely destroyed by a fire which originated in the adjacent bakery. Following the rebuilding of the setting and the renewal of fittings, the boiler was restored to service.

Three locomotive type boilers, owned by General Petroleums Limited, located at Atlantic Number Three Oil Well, were damaged when the well caught fire. These boilers have not yet been repaired.

There were a number of power boilers damaged when fire destroyed the boiler rooms, and, in addition, a large number were damaged due to low water and too heavily scaled heating surfaces. Several of these boilers were condemned and they were replaced by others. The majority of the remainder were repaired and restored to service.

A number of the damaged boilers were located in the oil fields where the boiler feed water contains a high percentage of scale forming impurities.

The new Imperial Oil Limited Edmonton Refinery was officially opened in September, 1948, and the Crude, Thermal Cracking and Caustic Units are now in operation. The steam plant consists of four 60 000 pounds per hour water tube boilers operating at 200 pounds per square inch.

New plants placed into operation during the year include the Alberta Salt Company, Lindbergh, the Canadian Utilities Limited, Vermilion, and Western Propane Limited, Turner Valley.

A number of new boilers were installed in existing power plants to increase their capacity and numerous new heating boilers were installed in new buildings throughout the Province.

The oil field activity has resulted in a tremendous demand for Oil and Gas Separators and Treaters, and it is gratifying to learn that some of these pressure vessels are now being fabricated in Alberta.

Strip mining on the Alberta Coal Branch is rapidly superseding underground mining with a consequent decreased demand for power from steam generating plants, which have now ample capacity for the reduced load.

There were three prosecutions for infringement of The Boilers Act and a conviction was obtained in each case.

Mr. R. Scott, Assistant Chief Inspector of Boilers, attended a conference of the Provincial Chief Boiler Inspectors, held in Montreal, May 20th and 21st, 1948, for the purpose of drafting a constitution for a proposed Canadian Board of Boiler and Pressure Vessel Inspectors. In spite of the apparent desire to achieve uniformity of interpretation and application of the A.S.M.E. Codes in Canada, a frank discussion brought to light the fact that a number of the Provinces would have to revise their Acts and Regulations, and the Chief Inspectors concerned were most reluctant to do so. The conference adjourned without reaching a definite decision.

At the invitation of the Executive Committee of the National Board of Boiler and Pressure Vessel Inspectors, Mr. Scott also attended a joint meeting of the Boiler Code Committee of the American Society of Mechani-

cal Engineers and the National Board of Boiler and Pressure Vessel Inspectors, held in Boston, Massachusetts, May 24th to 27th inclusive, 1948.

Concurrent with the joint meeting, the National Board of Boiler and Pressure Vessel Inspectors held its Eighteenth General Meeting.

The subjects discussed included the Proposed Revision of the A.S.M.E. Code for Unfired Pressure Vessels, which was then in the galley proof stage. Other questions related to the interpretation and application of several sections of the A.S.M.E. Codes as well as the clarification of recent rulings of the Boiler Code Committee.

All expenses incurred in attending these meetings were defrayed by the National Board.

From December 7th to 10th inclusive, 1948, Mr. Scott attended in Toronto a joint conference of the Canadian Steel Boiler Institute, Insurance Representatives and Provincial Chief Boiler Inspectors. The Boiler Manufacturers requested the Chief Inspectors to establish a Canadian Code Committee within the organization of the Canadian Standards Association. The Chief Inspectors promised to lay the matter before their respective superiors.

The Chief Inspectors also met the Executive of the Canadian Liquefied Petroleum Gas Association and discussed matters relative to the fabrication and installation of Propane Storage Tanks.

The expansion of industry in Alberta, and especially the oil industry, has resulted in a greatly increased demand for inspections services. Our district inspectors have accomplished a great deal in taking care of these demands, but their resources have been taxed to the limit.

The work in the Head Office has also increased tremendously, especially in the number of designs submitted for survey and registration.

There follows a summary of work accomplished during the year, along with a comparative summary of work and revenue for the years 1947-48 and 1948-49.

SUMMARY OF WORK AND REVENUE, 1948-49 and 1947-48

Type of Boiler or Pressure Vessel Inspected:	1949	1947-48
Liquefied Petroleum Gas Containers	321	247
Horizontal Return Tubular	288	328
Horizontal Furnace	56	32
Water Tube	220	172
Locomotive Type	731	765
Vertical	178	166
Receivers	2,418	2,529
Heat Exchangers	228	185
Oil Stills	15	8
Steam Processors	112	65
Steel Heating	753	585
Cast Iron	455	478
Miscellaneous	484	439
Total	6,259	5,999
Condition of Pressure Vessels Inspected:		
Good	4,206	4,182
Fair	1,894	1,719
Poor	118	78
Condemned	17	16
Scrapped	24	4
Total	6,259	5,999

Certificates Issued	4,989	5,129
Number of Inspection Visits	7,070	6,944
Number of Special Inspections Under Section 14 of the Alberta Boilers Act	80	63
Factory Act Inspections	531	629
Number and Class of Engineer's Certificates Issued		
First Class	4	5
Second Class, 750 h.p.	7	3
Second Class, 500 h.p.	21	13
Third Class	64	55
Special	4	10
Traction Final	5	
Fireman's Final	48	45
Provisional	359	347
Temporary	795	566
Welder's Certificates	98	33
Total	1,405	1,077
Number of Designs Surveyed	286	285
Revenue		
Surveying and Registering Designs	$ 2,712.50	$ 2,194.00
Pressure Vessel Registrations	46,278.00	44,918.00
Engineer's Registrations	2,353 00	2,411.00
Engineer's Certificates	7,323.00	5,187.50
Special Inspection Fees	1,671.07	1,410.54
	$60,337.57	$56,121.04

THE FACTORIES ACT

Since submitting the last annual report there has been considerable growth in industry within the province. Many new places of business have been opened and new factories erected.

The search for crude oil has continued with great success, especially so in the central part of the province and at the time this report is written, there are more oil well drilling rigs operating than at any other time in the history of the province and the weekly production of crude oil has more than double that of a year ago and new wells are being placed on production each week.

There were five fatal accidents on oil well drilling rigs during the year. The details are as follows:

E. A. Cunningham, employed as Derrick man by Drilling Contractors Ltd., drilling Home No. 7 well. Safety belt broke and workman fell from the fourble board to derrick floor, a distance of eighty-five feet.

L. Bourier, employed as roughneck by Federal Drilling Co., drilling Leduc-Calmar No. 1 well. The drill stem and kelly block slid to the bottom of the rat hole; the kelly block striking the workman and fracturing his skull.

L. Wybert, employed as derrick man by Northern Development Co., drilling Hanna Petroleum No. 3 well. While working on the fourble board, a flash fire of gas escaping from the well enveloped workman. He received fatal burns.

R. Perras, employed as roughneck by Can-Tex Drilling Co., drilling Imperial Well No. 124. The cathead was out of order and the driller was using the turntable to break the drill pipe joint, the cable holding drill pipe tongs broke, the tongs striking workman on side of head.

M. Schroeder, employed as cathead man by the Commonwealth Drilling Co., drilling Saskatchewan Co-operative No. 9 well. Cathead was accidentally put in operation picking drill pipe tongs from the floor, striking employee, knocking him against drawworks, fracturing his skull.

A small percentage of Hydrogen Sulphite gas has been found at some of the oil wells drilled in both the Leduc and Redwater fields. This has resulted in special precautions being taken in the gauging of storage tanks for crude oil in these two fields. Some new methods of constructing storage tanks with ventilators and gauging means are being developed to lessen the hazard in this occupation.

A new oil refinery, with a capacity for 6,000 barrels, was constructed in the Edmonton district and placed in operation during the past year. Work is now proceeding to increase its capacity to 11,000 barrels per day. Ground work is also being proceeded with for the construction of another refinery in the Edmonton district.

The Oil and Gas Conservation Board submitted copies of permits for the drilling of three hundred and seventy-nine oil wells for the information of this branch.

The inspectors of this Department inspected three hundred and sixty-three oil well drilling rigs and tank farms at which two thousand, two

hundred and ninety-two persons were employed. It was found necessary to make two hundred and seventy safety recommendations at the time of the inspections.

During the last four months of the year, the flour milling industry through lack of orders for their product have been compelled to reduce their production, most mills are operating only one shift in twenty-four hours and some mills have closed down temporarily.

The sugar beet crop was fully harvested during the fall of 1948, but the tonnage was less than that of 1947, due to late seeding. The erection of the new sugar factory at Taber is proceeding, but due to late delivery of equipment it is unlikely that it will be ready to operate in 1949.

The processing of canned vegetables has been of greater volume during the past year than in any preceding year. The plant at Brooks is being moved to the Lethbridge district as it is believed the Lethbridge district shows better possibilities for this industry.

Production of the meat packing industry was not as great as during the preceding year due principally to a lesser amount of live stock being delivered to markets and the embargo being lifted governing the export of live stock to the United States.

Construction of houses and other building operations created a greater need for those building materials manufactured in the province, such as lumber and other wood products, brick, tile and cement. The erection of homes created demands for furniture and furnishings, thereby making for full employment in those factories manufacturing these products.

Employment in the catering industry has exceeded that of the previous year and several new cafes have opened.

During the year, copies of all inspectors' reports have been furnished the Workmen's Compensation Board, and the Board has notified this Branch of many accidents and the manner in which they occurred. This information being of considerable benefit to our inspectors in the course of their duties. Our inspectors on many occasions have made investigations as to the cause of accidents in order to prevent similar accidents occurring, both at the request of the Workmen's Compensation Board and by employers.

Inspectors again have devoted the greater part of their time to those centres where large factories and shops are situated, and where the greater number of employees were known to be employed.

Requests for special inspections have continued to be made both by employers and contractors when alterations in present structures, and the changing of equipment were being made and when new buildings were being erected.

The cities of Medicine Hat and Lethbridge have no resident inspectors; they have, however, received periodical visits from inspectors resident in Edmonton and Calgary, Lethbridge receiving eight and Medicine Hat seven. Periodically during the year, inspectors made inspections in those parts of the province where oil wells were being drilled and where outlying factories are situated.

Table number one which follows, sets forth the number and classification of inspections made, together with the number of male and female employees under each class and the number of safety recommendations made. Under the heading "SAFETY," recommendations were made relative to the guarding of machinery and shafting, handrails and stairways, runways and platforms, openings in floors, condition of ladders and scaffolding, access to exits and fire escapes and good housekeeping.

TABLE No 1

SUMMARY OF INSPECTIONS AND EMPLOYEES

	No of Inspections Made	No of Male Employees	No of Female Employees	Total No of Employees	No of Safety Recommendations
Factories	2,310	25,255	6,175	31,430	1,145
Shops	1,868	13,963	9,584	23,547	152
Office Buildings	99	491	317	808	7
Totals	4,277	39,709	16,076	55,785	1,304

Passenger and Freight Elevators

A total of forty-five new elevators were installed during the year, classified as follows:

Four Passenger Escalators.
Thirteen Passenger Elevators.
Twenty-five Power Freight.
One Handpower.
Two Power Dumbwaiters.

Seven hundred and fifty-three elevator inspections were made and of these ninety were special or requested inspections. Twenty-five elevators were found not to be operating at the time of inspections and a total of seven hundred and fifty-three elevator inspection certificates were issued which will net a revenue of three thousand and two ($3,002.00) dollars.

Table number two contains information relative to the number of elevator inspections made, classification of such elevators inspected, and the number of safety recommendations in each classification.

TABLE No 2

SUMMARY OF ELEVATOR INSPECTIONS

Class of Elevators Inspected	No. Insp.	No. Rec
Escalator	17	6
Passenger	211	357
Power Freight	406	748
Manually Operated Freight	54	86
Employee's Belt-lift or Humphrey	27	33
Power Dumbwaiter	38	35
Not Being Operated	25	
Condemned	9	6
Dismantled or Scrapped	11	
Reinspected. Passenger	40	23
Freight	34	33
Manual	2	
Humphrey	3	3
Dumbwaiter	0	0
	877	1330

Sixteen accidents occurred on elevators during the year. This was a decrease of eleven accidents from the preceding year reported to the Department.

The following is an analysis by causes of the total accidents reported and investigated:

Shear platform to threshold	5
Hand or head injuries in closing gates and doors	7
Caught in moving parts	1
Miscellaneous	3
Total	16

The above accidents were caused by the following:

Unsafe conditions	1
Unsafe acts	11
Undetermined	4
	16

No prosecutions were made by the Department for infractions of The Factories Act during the year.

THE ELECTRICAL PROTECTION ACT

The expansion of the electrical industry has continued at a very high rate throughout the year, but distribution and installation facilities are still inadequate to keep pace with the demand.

Extensive additions were made to the generating capacity of the steam driven plants operated by the City of Edmonton and the Canadian Utilities. Calgary Power Limited commenced the development of a hydro project which will in the course of a few years approximately double their present generating capacity of 105,000 KVA.

The consumption of electricity increased approximately eleven per cent during the year and while there were no restrictions on the use of electric power, similar to those enforced in Ontario and British Columbia, there were times when some of the large customers were required to reduce their consumption to a considerable extent.

Further additions were made to transmission and distribution lines and many new areas were supplied with central station power. Among the new extensions are the Calgary Power lines from Taber to Bow Island and Taber to Brooks, and the Canadian Utilities extensions to their lines in the Vermilion and St. Paul districts.

Rural electrification was proceeded with on large scale and extensive new districts were served at Rosemary, Indus, Gladys Ridge, Blackfalds, Lacombe, Eckville, Wetaskiwin, Winterburn, Stettler and St. Paul. A number of smaller rural areas were served in other districts and a number of individual farms were served from adjacent transmission lines. Approximately 2,000 rural services were added during the year requiring the construction of approximately 1,500 miles of rural distribution lines.

The oil development in the Edmonton district added a great deal to the electrical requirements in that area. A new town was built and served at Devon, and extensive additions were made to the electrical installations in the towns of Leduc and Redwater. A new Imperial Oil Refinery was constructed adjacent to Edmonton with an initial load of 2,500 h.p. electrical power. The inspection of all these new installations has come under this department and involved a considerable increase in inspection work.

The supply of materials required for electrical work has improved greatly during the year and with the exception of a few items affected by the steel shortage, were generally available at short notice. The labor situation also improved during the year and more competition was noticeable for the work available. There are, however, many rural areas where men with limited qualifications and experience are able to engage in electrical work and the inspection of such installations is very necessary.

Two fatal and five other accidents caused by electric shock occurred during the year. One of the fatal accidents occurred to a lineman employed by the City of Edmonton, and was due primarily by failure to observe standard safety rules. The other fatal accident occurred to a workman on a building, who failed to heed repeated warnings regarding the danger of contacting the adjacent power line. No persons were killed or injured during the year as a result of moving buildings under power lines. This is the first year since 1941 that no accidents of this kind have been reported.

Very few alterations were made to existing regulations during the year. Alterations to rules in the Canadian Electrical Code dealt mainly with provisions covering the use of new types of materials available.

Meetings were held with representatives of the Western Canada Petroleum Association and the Workmen's Compensation Board to draw up rules covering electrical installations at oil well derricks. It is expected that the rules agreed upon will be adopted under The Factories Act in the near future.

The further use of the earth as a return conductor for electrical distribution was discussed at a meeting held in Edmonton in February. This meeting was attended by representatives of the Alberta Government Telephones, Utility Companies and the Inspection Department. A new set of rules was drawn up which will permit the wider use of the earth as a return conductor, where low ground resistance is obtainable and where interference with communication circuits does not occur.

Minor revisions were made to the Rural Wiring Regulations early in 1948 and pamphlets covering these rules were reprinted and made available free of charge. The demand for these pamphlets has been greater than anticipated. They apparently fill a much needed simplification of rules for farm wiring. Generally speaking the rural users of electricity are very anxious to have their electric wiring inspected to make sure that the installation is safe and reliable.

The test and approval of electrical equipment by the Canadian Standards Association continued at a high rate and very few items of equipment are now being imported which have not been submitted to this organization for test and approval. The C.S.A. Factory Inspections in this province have now been taken over entirely by this department on a special inspection fee basis. These inspections cover various types of electrical equipment and appliances manufactured in the province and when approved, are accepted by inspection departments throughout the Dominion. These Factory Inspections involve considerable extra work in the Calgary and Edmonton districts and have also brought in considerable revenue to the Department.

The annual meeting of the Provincial Code Committee and Municipal Inspectors was held in February. A very thorough discussion of contentious rules and interpretations took place. Several recommendations were made for changes and additions to the Canadian Electrical Code rules and these recommendations will be presented to the Central Committee of the C.E. Code for consideration at their next meeting.

The amount of inspection work needed has been far in excess of that which can be done by the present staff and it has therefore been impossible to make many of the inspections requested by both town and rural residents. The present inspection staff are six in number with two at Calgary, two at Edmonton and one each at Lethbridge and Red Deer. It is hoped to add further to this staff in the coming year. It has been found very difficult to find qualified men with suitable training and experience for this work.

The following is an outline of the inspection work carried out during the year. In this respect, a study of the new service reports received from Utility Companies indicates that the reports received are probably less than fifty per cent of the new service connections made. It would there-

fore, appear that the proposed Permit System is an absolute necessity if the inspection work is to cover thoroughly the electrical work done in the province.

New Service Reports from Power Companies	2,171
Inspections resulting in Requisitions	2,183
Inspections and interviews away from office with no Requisition issued	859
Miles travelled by inspectors	41,944
Number of days on field inspections	467
Transmission Line plans received	134
Fatal accidents investigated	2
Other accidents investigated	5
C.S A. Factory Inspections	43
C.S.A. Approval reports received and checked	1,140

THE WELDING ACT

Welding Examinations

During the year ending March 31st, 1949, 783 examinations were held at Edmonton, Calgary, Lethbridge, Medicine Hat, Red Deer, Drumheller and Lloydminster. As a result the following certificates were issued: Journeymen (125), Special (482), Provisional (32), Temporary Special (12) and Apprentice (417). There were 132 complete failures.

1,068 certificates were issued for examinations, and 27 as replacements for lost or destroyed certificates, making a total of 1,095 certificates issued.

Inspections

Welding examiners travelled 19,304 miles, an average of nearly 5,000 miles each.

Shop inspections recorded totalled 1,530; these were almost equally distributed among the three branches.

Prosecutions

During the year 35 persons were prosecuted for infractions of Section 9 of The Welding Act, and 4 persons were prosecuted under Section 10. In 31 cases convictions were secured. Four cases were dismissed.

Accidents

Accidents during the year were few and no fatalities were reported. Out of a total of 19 accidents ten required hospitalization for a few days.

Nine of these accidents resulted from explosions, two of which were caused by acetylene generators. Five acetylene generators exploded but were not reported. No one was injured.

Apprentices

Apprentices are taking up a lot of time both of the examiners and the office staff. It may be necessary to limit all welders to two apprentices each during any one year. Some welders are abusing this part of the regulations, and the "bonding apprenticeship" may be the solution.

Illegal Operation of Welding Equipment

Farmers doing custom welding are creating a serious problem. They are well aware that they cannot be checked and many are abusing the privileges provided by The Welding Act.

The increase in industrial and other development in Alberta has brought about a very large influx of welders. This in turn has overloaded the Department with applications for examinations. During the past year there has been insufficient equipment and examiners to deal promptly with all applications. If this pressure continues, more examiners and greater facilities for conducting examinations will be necessary.

HIGHWAY TRAFFIC BOARD

(C. H. N. MONKMAN, *Chairman;* H. R. CLARK, *Secretary*)

The year 1948-49 again shows an increase in the number of motor vehicles registered with the Board, there being a total of 58,246 licenses issued as against 50,311 for the previous year, which shows an increase of 7,935 registrations. A large percentage of the increase is for farm vehicles and also for vehicles engaged in our rapidly growing oil industry.

Licenses for the year were as follows:

Buses	392	Commercial Vehicles	6,245
Liveries	674	C & U Restricted Area	3,999
School Vans	914	Government-Provincial, Federal & Municipal	2,521
Drive Your Self Cars	57	Miscellaneous	4,621
Farm Trucks	29,872		
Grain Hauling	290		
Public Service	8,661	Total	58,246

Various applications for bus franchises, extensions and transfers were dealt with as follows:

Franchises

Sorensen Bus Lines	Wimborne-Acme
City of Lethbridge	City Limits-Airport
P. J. Wesley	Lethbridge-Etzikom
McLennan Brothers	Calgary-Cremona
McLennan Brothers	Cremona-Carstairs

Service Discontinued

G. Nielsen	Calgary-Hussar
O Hagen	Lethbridge-Etzikom
Canadian Coachways Limited	Edmonton-Lindale
Canadian Coachways Limited	Grande Prairie-Spirit River

Extension of Routes

L. Blair	Elkwater-Wild Horse
Cardinal Coach Lines	Rimbey-Bluffton
Transfer:	
Crescent Stage Lines to G. Reith	Stettler-Drumheller

The following certificates were in effect at March 31, 1948:

Alberta Montana Bus Lines	Lethbridge-Coutts
Alberta Railways	Calgary-Milo
Allen & Wilson Bus & Taxi Service	Ponoka-Mental Hospital
Beverly Bus Line	Edmonton-Beverly
Blue Goose Lines	Edmonton-Newbrook
Branch Lines Limited	Mountain Park-Cadomin
	Mountain Park-Edson
Canadian Coachways Limited	Edmonton-Athabasca
	Edmonton-Breton
	Edmonton-Lac La Biche
	Edmonton-Flatbush
	Edmonton-High Prairie
	Grande Prairie-High Prairie
	Grande Prairie-Valleyview
	Grande Prairie-Dawson Creek
	High Prairie-Fairview
	Edmonton-Devon
Carbon Bus lines	Carbon-Central Service Station
	Carbon-East Carbon Coal Mine
Cardinal Coach Lines	Calgary-Stettler
	Red Deer-Consort
	Lacombe-Rimbey
Claes, Henry	Coleman-Sentinel-Frank
Crown Coal Co. Limited	Edmonton-Penn Mine
	Edmonton-Starkey Mine
Diamond Lines	Edmonton-Black Diamond Mine
	Edmonton-Imperial Oil Refinery
Drayton Valley Bus Line	Entwistle-Drayton Valley
Edmonton Transit System	City Limits-Refinery
Feistay, John	Crowsnest District
Gateway to Yellowknife Bus Lines	Hotchkiss-Peace River
Highway Coach Lines Limited	Edmonton-Two Hills
Knox, John	Medicine Hat-Hilda
Lethbridge, City of	City Limits-Airport

Lethbridge Northern Bus Lines	Lethbridge-Turin
	Lethbridge-Picture Butte
Monden Transportation	Calgary-Longview
	Calgary-Bragg Creek
McLennan's Welding & Repair	Cremona-Calgary
Northern Beaver Bus Lines	Waterways-Ft. McMurray
Northland Arrow Lines	Edmonton-Barrhead
	Barrhead-Ft Assiniboine
	Edmonton-Westlock
	Edmonton-Barrhead via Zion
Petrone, Guido	Hillcrest-Mohawk Mines
Reith Bus Lines	Stettler-Drumheller
Riverdale Coal Co. Limited	Edmonton-Riverdale Mine
Shaw, James	Edmonton-Berrymoor
Sorenson Bus Lines	Calgary-Stettler
	Red Deer-Rocky Mtn. House
	Rocky Mtn House-Nordegg
Sunburst Motor Coaches Ltd.	Edmonton-Chauvin
	Edmonton-St. Paul
	Edmonton-Sask. Border
	Wetaskiwin-Winfield
	Edmonton-Cold Lake
	Edmonton-Alliance
	Edmonton-Alix
Taylor, Chas. H	Sundre-Olds
United Mine Workers' Assn.	Lethbridge-Galt Mine
Valley Bus Lines	Drumheller-East Coulee
	Drumheller-Wayne
	Drumheller-Nacmine
	Drumheller Midland
Van Wert, T.	Redcliff-Medicine Hat
Vauxhall Bus Line	Vauxhall-Taber
Wesley, Paul	Lethbridge-Etzikom
Western Canadian Greyhound Lines	Macleod-Cardston
	Macleod-Crowsnest
	Macleod-Walsh
	Calgary-Edmonton
	Calgary-Medicine Hat
	Edmonton-Lloydminster
	Calgary-Alsask
	Calgary-Macleod
	Calgary-Cardston
	Calgary-Banff
	Edmonton-Jasper
Western Motor Coaches	Edmonton-Mayerthorpe
	Edmonton-Lac La Nonne
	Edmonton-Alberta Beach (Summer)

A summary of the year's bus activities follows:

ACTUAL MILES TRAVELLED

	Dirt Roads	Surfaced Roads	Totals
1948-49	420,194	5,936,619	6,356,813
1947-48	566,095	5,131,476	5,697,571
Decrease	145,901		
Increase		805,143	659,242

PASSENGER MILES TRAVELLED

	Dirt Roads	Surfaced Roads	Totals
1948-49	11,362,428	189,643,163	201,005,591
1947-48	15,117,711	158,296,214	173,413,925
Decrease	3,755,283		
Increase		31,346,949	27,591 666

PASSENGERS CARRIED

1948-49	3,180,538
1947-48	2,742,281
Increase	438,257